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BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of Application No. 99-1:

SUMAS ENERGY 2 GENERATION
FACILITY

**SETTLEMENT AGREEMENT
BETWEEN WASHINGTON
DEPARTMENT OF FISH & WILDLIFE
AND SUMAS ENERGY 2 REGARDING
SECOND REVISED APPLICATION**

I. Introduction

A. Parties

Sumas Energy 2, Inc. (SE2) is seeking a Site Certification Agreement (SCA) from the Energy Facility Site Evaluation Council (EFSEC) to construct and operate the proposed Sumas 2 Generation Facility (S2GF or Project).

Washington Department of Fish and Wildlife (WDFW) has a mandate to preserve, protect, manage, and perpetuate the state's fish and wildlife resources including habitat. WDFW is a party to the site certification adjudication before EFSEC.

B. Purpose and Intent

On May 12, 2000, SE2 and WDFW (collectively, the "Parties") entered into a stipulation in this proceeding which addressed all of the issues raised by WDFW with the exception of identification of wetland resources, and the protection and mitigation of wetland impacts (Exhibit 3). On July 17, 2000, the Parties entered into a supplemental stipulation to

1 address the identification of wetland resources, impacts to those resources, and SE2's agreed
2 protection and mitigation actions regarding those resources (Exhibit 5). Following SE2's
3 filing of a Second Revised Application on June 29, 2001, SE2 and WDFW have been
4 involved in discussions and negotiations related to the Project's potential effect upon fish and
5 wildlife resources, including habitat and wetlands. The provisions of this Agreement are
6 intended to reaffirm the commitments in and to replace the provisions of the May 12, 2000
7 Agreement and the July 17, 2000 Agreement between the Parties previously entered into the
8 EFSEC adjudicatory record.
9

10 The Project consists of a 660 MW combined-cycle combustion turbine generation
11 facility and associated facilities, including a 4.25-mile natural gas pipeline, and a 5.9-mile,
12 230 kV transmission line connection facility. Through this Agreement, WDFW and SE2 set
13 forth the obligations and restrictions that the Parties intend to have incorporated into the SCA
14 as conditions for the Project should EFSEC recommend that the Project be certified. The
15 obligations and restrictions set forth in this Agreement relate to resources that will be affected
16 by construction and operation of the Project facilities at the Project site, the construction and
17 operation of the approximate 4.25-mile natural gas pipeline from the border crossing east of
18 Sumas, Washington to the Project site, and the construction and operation of the approximate
19 5.9-mile electrical transmission line from the Project site to the Canadian electrical grid at
20 British Columbia Hydro's Clayburn Station, as these components are proposed at the time of
21 entry of this Agreement. The Parties agree to amend this Agreement, as necessary, if the
22 proposed project changes substantially from that proposed at the time of entry of this
23 Agreement. The Agreement does not address issues that may be raised at EFSEC or non-
24 EFSEC proceedings outside the adjudicative hearing or other Project impacts, if any.
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1 **C. Resolution of Issues**

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3 SE2 has undertaken preliminary site impact assessments to identify the primary
4
5 impacts expected from construction and operation of the Project facility, gas pipeline, and
6
7 electrical transmission line. The Parties agree that not all impacts may be known and
8
9 therefore, the Agreement contains commitments to address currently expected specific
10
11 impacts and a commitment to principles of impact assessment and mitigation for potential
12
13 future unknown impacts.

14
15 The Parties further agree that SE2 will comply with any conditions in any settlement
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17 agreement with the Washington Department of Ecology (WDOE) that set stricter standards
18
19 regarding wetlands and water quality.

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21 **II. SE2 Commitments**

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23 **A. SE2's Commitments**

24
25 SE2 agrees that the mitigation measures identified in this Settlement Agreement shall
26
27 be implemented if construction of the proposed electrical generation project proceeds
28
29 pursuant to an SCA. The parties agree that SE2 will comply with any SCA requirements that
30
31 set stricter standards regarding protection of fish, wildlife or their habitat, than those
32
33 contained in this agreement.

34
35 **B. Project Application**

36
37 SE2 agrees that the applicable mitigation measures identified in the following
38
39 sections of its S2GF Second Revised Application shall be incorporated into the amended
40
41 SCA as binding commitments: section 1.4 (Mitigation Measures); section 2.10 (Surface
42
43 Water Runoff); section 2.14 (Construction Methodology); and section 3.4 (Plants and
44
45 Animals).

1 **C. Impact Assessment and Mitigation**

2
3 The Parties agree that the principles of impact assessment that have been applied to
4 the currently expected impacts and that shall be applied to all unforeseen impacts are, in
5 descending order of importance, 1) avoid the impact wherever possible; 2) minimize the
6 impact, 3) provide on-site, in-kind mitigation, and 4) provide off-site compensatory
7 mitigation.
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12 **D. Wetland Impacts and Mitigation**

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14 WDFW and SE2 agree that, to the extent impacts to wetlands habitat cannot be
15 avoided in the construction and operation of the Project, the impacts will be mitigated as
16 follows:
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20 **1. Wetland Delineation & Mitigation Report**

21 SE2 shall prepare a final wetland mitigation plan that includes a combination
22 of wetland preservation, enhancement and creation to replace wetlands that will be filled
23 and/or altered. The plan shall be based upon Figure 3.4-5 as revised on August 31, 2001
24 (Exhibit ADE-5); this stipulation; any stipulation between SE2 and WDOE regarding
25 wetlands; and the "Wetland Delineation & Mitigation Report" (the "Report") dated June 26,
26 2000 (filed with EFSEC as Exhibit JW-4) as modified by the Second Revised Application
27 and the prefilled testimony of A. David Every (Exhibit ADE-T).
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37 **2. Restoration, Stabilization, and Revegetation**

38 a. Suggested native species that may be used for revegetation in the on-
39 site constructed wetland include: Black cottonwood, Red alder, Salmonberry, Scouler
40 willow, Pacific willow, Red-osier dogwood, Slough sedge, and Tall mannagrass.
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43 b. Suggested native species that may be used for revegetation in the on-
44 site enhanced wetland include: Black cottonwood, Red alder, Salmonberry, Scouler willow,
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1 Pacific willow, and Red-osier dogwood. Western Red Cedar and Western Hemlock will be
2
3 planted to enhance the existing PSS/PFO wetland.

4
5 c. Suggested native species that may be used for revegetation in the on-
6
7 site nonwetland buffer include: Western Hemlock, Western Red Cedar, Black cottonwood,
8
9 Red alder, Vine maple, Wild Rose, Salmonberry, Scouler willow, Bearded fescue, Hair
10
11 Bentgrass, and Native Bluegrass (*Poa nervosa*).

12
13 d. Suggested native species that may be used for revegetation in
14
15 emergent pasture wetlands include: Slough sedge, Beaked sedge, Spike bentgrass,
16
17 Bluejoint reedgrass, and Northern mannagrass.

18
19 e. No red fescue or Douglas spirea shall be used for revegetation.

20
21 f. Seeds, seedlings, and plants for revegetation shall be obtained only
22
23 from established and reputable sources in the Pacific Northwest.

24
25 **3. Additional Mitigation**

26
27 a. SE2 shall undertake tree and shrub plantings in the newly created
28
29 wetland mitigation areas so that 50% of the cover for those vegetation types will be achieved
30
31 by Year 10.

32
33 b. SE2 agrees to plant Western red cedar trees and Western hemlocks in
34
35 the forested and shrubbed wetland located in the Northwest portion of the site to enhance this
36
37 wetland. The trees will be planted on 15-foot centers or in pods through the wetland where
38
39 the elevation is conducive for their growth. SE2 agrees to develop a detailed plan for these
40
41 plantings and to consult with, and seek consensus with WDFW during the development and
42
43 review of the plan. The parties agree that the plan will include site-specific performance
44
45 standards that will be in lieu of the vegetation performance standards set forth in the Report.
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47

1 c. SE2 agrees to modify the design of the drainage ditches on the site,
2 including the outlet design, to insure that an adequate supply of water is provided to the
3 wetlands being created and enhanced, and to provide additional habitat features. This
4 modification will include maintaining a vegetative channel east of the forested and shrubbed
5 wetland, along the south property line, and the east property line south of the connection with
6 the existing 42 inch culvert as shown in Figure 2.7-1A of the Second Revised Application.
7 Additional vegetative channels will be considered for the north side and east side, north of
8 the existing 42-inch culvert, of the project site, provided that there is adequate width on the
9 east side of the property site in conjunction with a landscaped screen. SE2 agrees to develop
10 a design plan for these modifications and to consult and seek consensus with WDFW during
11 development and review of the plan.
12

13 d. SE2 agrees, in coordination with WDOE and WDFW to develop a
14 Performance Plan ("Plan") for its wetland mitigation. The Plan will include the following: a
15 description of monitoring that must be performed; a monitoring schedule; submittal of
16 monitoring reports on a prescribed schedule; performance standards for each aspect of the
17 wetland mitigation plan; and contingencies in the event that any aspect of the wetland
18 mitigation plan fails.
19

20 e. SE2 agrees that, in lieu of the dedication or easement to the City of
21 Sumas described in Sections 1.4 and 3.4 of the Second Revised Application, prior to
22 construction, SE2 will execute and record on the property deed a restrictive covenant with
23 respect to the wetland and upland mitigation sites in substantially the form attached hereto as
24 Exhibit A.
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1 **E. Natural Gas Pipeline and Electrical Transmission Line**

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3 The proposed project includes a 4.25-mile natural gas pipeline from the
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5 U.S./Canadian border east of Sumas, Washington to the S2GF site, and a 5.9-mile 230 kV
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7 electrical transmission line from the S2GF site to BC Hydro's Clayburn Substation,
8
9 approximately 0.5 miles of which is located in Washington State. SE2 shall apply the
10
11 priority of mitigation principles (avoid, minimize, restore and replace, in that priority order)
12
13 in its decisions and actions in planning, constructing, operating and maintaining the natural
14
15 gas pipeline and the portion of the electrical transmission line, located in Washington State.
16
17 To effectuate application of the principles, SE2 shall, prior to construction of the pipeline,
18
19 create a detailed pipeline construction plan, which shall contain, at a minimum, the following
20
21 wetland, riparian, and aquatic habitat protection standards. Prior to construction of the
22
23 electrical transmission line, SE2 shall also create a detailed transmission line construction
24
25 plan that shall contain, at a minimum, design features that prevent avian electrocution and
26
27 collision in addition to the protection standards in subsections E1, 2, 3, 4, 7 & F3 of this
28
29 Agreement. The parties agree that to the extent that one or more of the following standards
30
31 or requirements cannot be met, SE2 and WDFW shall confer, and insofar as possible agree,
32
33 on the appropriate standard or requirement to be used and amend the Agreement accordingly.
34

35 **1. Construction Timing**

36
37 a. a. As suggested in section 1.4 of the revised Application, all "out of the
38
39 water" soil disturbing activities associated with wetland, stream, or river crossings shall occur
40
41 during the dry portion of the year, typically late spring through early fall.

42
43 b. b. Construction related activity that may be necessary within the wetted
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45 channel and/or within fifty feet of the bank shall be limited to the period of June 15 through
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1 October 15. This provision shall supersede any other or inconsistent dates provided
2
3 elsewhere.

4
5 **2. Access, Staging, and Ancillary Areas**
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7 a. All equipment crossing a water body must use a construction bridge.
8
9 Culvert crossings are not allowed.

10
11 b. All equipment bridges shall be designed to pass the maximum flow
12
13 and be maintained to prevent flow restrictions during the period that the equipment bridge is
14
15 in place.

16
17 c. The only access roads, other than the construction right of way, that
18
19 may be used in wetlands are those existing roads that can be used with no modification and
20
21 no impact on the wetland.

22
23 d. Locate all staging areas, additional spoil storage areas, and other
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25 additional work areas at least 50 feet away from the ordinary high water mark or wetland
26
27 boundary. In no event shall vegetation be cleared between these areas and the water body or
28
29 wetland. Limit size to minimum needed to construct the wetland or water body crossing.

30
31 e. Refuel all construction equipment at least 100 feet from water bodies
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33 or wetland boundaries.

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35 **3. Spoil Pile Placement and Control**
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37 a. The upper 12" of topsoil will be reserved, separated from subsoil, and
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39 returned to the trench as a final layer for planting.

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41 b. All spoil material from water body crossings must be placed in the
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43 right of way at least 50 feet away from the ordinary high water line. All spoil shall be
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45 contained within sediment filter devices.
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1 **4. General Construction Procedures/ Monitoring of Performance**

2
3 a. Notify the WDFW at least 48 hours prior to commencement of pipe
4 installation activities under each water body.

5
6 b. In wetlands and riparian areas, limit the construction rights-of-way
7 width to 50 feet or less.

8
9
10 c. In wetlands and riparian areas, vegetation that must be removed shall
11 be cut at ground level, leaving existing root systems intact. Limit pulling of tree stumps and
12 grading activities to those areas where root systems would directly interfere with trenching,
13 pipe installation and backfill.

14
15 d. If standing water or saturated soils are present, use low ground weight
16 construction equipment and/or operate on prefabricated equipment mats.

17
18 e. Pre-construction wetland hydrology, which will be documented during
19 pre-construction planning, will be maintained with the installation of impermeable plugs at
20 the edge of the wetland, and in the pipeline trench, comprised of an impermeable material.

21
22 f. Silt fencing will be used to protect wetlands outside the construction
23 corridor from sedimentation.

24 g. The affected wetland areas will be regraded to pre-project contours.

25 h. The flow of the existing ditches will be restored and maintained after
26 construction.

27
28 i. Disturbed areas will be revegetated with approved native vegetation, or
29 vegetation consistent with ongoing agricultural use, prior to the next wet season following
30 construction.

j. Emergent wetland areas will be reseeded or hydro-seeded with a mix of native species, identified in section II.D.2, which will be selected after consultation with WDFW prior to the next growing season.

5. Specific Stream and River Crossing Methods¹

STREAM NAME

METHOD

Sumas Creek

Horizontal Directionally Drill

Johnson Creek

Horizontal Directionally Drill

Bone Creek

Horizontal Directionally Drill

6. Hydrostatic Testing

a. Perform 100 percent radiographic inspection of all section welds prior to installation under water bodies or wetlands.

b. Screen the intake hose (3/32" perforations) to prevent entrainment of fish. The maximum approach velocity shall not exceed 0.4 feet/second.

c. At least thirty days prior to use, provide to EFSEC, WDOE and WDFW a list of specific locations proposed for withdrawal and discharge of hydrostatic test water and allow EFSEC to review and comment on the list in consultation with WDFW and WDOE.

d. Notify EFSEC, WDFW and WDOE of intent to begin using specific sources at least 48 hours prior to testing.

¹ Subject to engineering feasibility and Army Corps of Engineer requirements. If SE2 determines it cannot cross Sumas Creek, Johnson Creek, or Bone Creek by horizontal directional drilling, SE2 will inform WDFW of the alternative crossing method. If after review of the alternative method, WDFW believes additional conditions are necessary, SE2 and WDFW will amend this Agreement to add conditions related to the alternative crossing method.

1 e. Maintain adequate flow rates at all times to protect aquatic life and
2 provide for all other water body uses, including downstream withdrawals.
3

4 f. Hydrostatic test manifolds shall be located outside wetlands and
5 riparian areas.
6

7 g. If a utility line is pressure tested using water or chlorinated water, and
8 such water is to be discharged to waters of the State upon completion of the test, such
9 discharge shall not cause an exceedance of State water quality standards.
10

11 h. Regulate discharge rate and use energy dissipation device(s) in order to
12 prevent erosion of upland areas, stream bottom scour, suspension of sediments, or excessive
13 stream flow.
14

15 **7. Restoration, Stabilization, and Revegetation**

16 WDFW and SE2 agree that, to the extent impacts to fish and wildlife habitat cannot
17 be avoided in the construction and operation of the Project, SE2 shall undertake the following
18 mitigation measures:
19

20 a. Shrub and Riparian Habitat Mitigation

21 (1) Shrub and riparian areas that are cleared for construction of the
22 gas pipeline or the electrical transmission line will be restored to shrub habitat by SE2
23 following construction. For shrub areas that are cleared and that are not returned to shrub
24 habitat, or that have not met the revegetation success criteria in section II.F.2, mitigation shall
25 be by replacement of shrub habitat (restoration or creation) in selected locations that are
26 controlled by SE2, or otherwise protected, in an amount equal to twice the unrestored shrub
27 area. Successful planting of shrubs in formerly disturbed herbaceous sites (such as
28 abandoned agricultural fields) shall qualify. It is understood by the parties that the gas
29 pipeline and electric transmission line are being constructed in easements not on property
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1 owned by SE2; therefore, SE2 will not have control of activities of the owner after SE2's
2 restoration activities are implemented.
3

4 (2) With respect to the electrical transmission line, trimmed
5 material and tree trunks will be typically left on the ground in natural vegetated areas for
6 habitat features. Footing construction areas are to be restored and revegetated according to
7 pre-construction conditions.
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12 b. Herbaceous Habitat

13 (1) Disturbance impacts to herbaceous habitat shall be mitigated by
14 restoration of the disturbed areas using approved native species with safeguards against
15 weedy invasive species.
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20 (2) In areas where the natural gas pipeline traverses cultivated
21 agricultural areas, or areas occupied exclusively with grasses, the grass areas will be re-
22 seeded, while areas planted in corn may be left as is.
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27 c. Forest Habitat

28 Trees that are removed from the rights of way due to construction and trees
29 beyond fifteen feet from the pipeline centerline that are removed from the rights of
30 way in the course of maintenance activities shall be replaced. Replacement trees shall
31 be standard size apple and crabapple, or other appropriate fruit producing trees, and
32 will be planted in selected locations that are controlled by SE2, or otherwise
33 protected. Those locations will be more than fifteen feet from the centerline of the
34 pipe. Tree replacement will be at a ratio of three new trees for each tree removed.
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43 d. Wetland Habitat

44 Suggested native species that may be used for revegetation in
45 emergent pasture wetlands include: Slough sedge, Beaked sedge, Spike bentgrass,
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1 Bluejoint reedgrass, and Northern mannagrass.

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3 e. No red fescue or Douglas spirea shall be used for revegetation.

4 f. Seeds, seedlings, and plants for revegetation shall be obtained only
5
6 from established and reputable sources in the Pacific Northwest.
7

8
9 **F. Miscellaneous**

10
11 1. Right-of-Way Maintenance Practices

12 a. SE2 shall not use herbicides or pesticides in or within 100 feet of a
13 water body unless such use has been approved by WDFW and WDOE as a means of
14 preventing the spread of undesirable exotic vegetation in conformance with II.F.3 below.
15

16 b. SE2 shall not utilize vegetation maintenance practices for normal right
17 of way maintenance over the full width of the permanent right of way in wetlands and
18 riparian areas. To facilitate periodic pipeline surveys, however, a corridor centered on the
19 pipeline up to ten feet wide may be maintained in a herbaceous state. In addition, trees that
20 are located within fifteen feet of the pipeline and are greater than fifteen feet in height may be
21 selectively cut and removed from the right of way by SE2. Trees beyond fifteen feet from the
22 centerline of the pipeline that are cut or removed in the course of maintenance activities shall
23 be replaced using the replacement criteria described in section II.E.7 of this agreement.
24
25

26 2. Revegetation Success

27 SE2 shall monitor the success of revegetation annually, with written reports to
28 EFSEC and copies to WDFW and WDOE, for the first five years after construction. SE2 will
29 also undertake revegetation monitoring and reporting in Years 7 and 10. Revegetation of
30 wetland, riparian, and upland areas that are currently vegetated with native species is
31 considered successful if the native herbaceous and/or woody cover is at least eighty percent
32 of the total cover, and native species diversity is at least fifty percent of the diversity
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1 originally planted in the area. If revegetation of riparian and upland habitat is not successful
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3 at the end of five years, SE2 shall provide off site mitigation at the replacement ratios found
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5 in section II.E.7. If wetland revegetation is not successful at the end of five years, the project
6
7 sponsor shall develop and implement (in consultation with a professional wetland ecologist
8
9 and the Departments of Ecology and Fish and Wildlife) a plan to actively revegetate the
10
11 wetland with native wetland herbaceous and woody plant species.

12
13 3. Exotic Vegetation

14 SE2 shall develop specific procedures to prevent the invasion or spread of undesirable
15
16 exotic vegetation.
17

18
19 **G. Other Plans**

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21 1. SE2 agrees to develop the following plans and to consult with, and seek
22
23 consensus with, WDFW during the development and review of the plans:

24
25 a. Environmental Protection Control Plan/Construction Management
26
27 Plan(s) to include an independent environmental monitor with stop-work authority who
28
29 reports to a state agency.

30
31 b. Erosion and sediment control plan.

32
33 c. Restoration of ROW plan including restoration and maintenance
34
35 practices, schedules, monitoring methods, contingencies, and noxious weed control measures.

36
37 d. Construction water use and control plan.

38
39 e. Right of Way Management Plan.

40
41 f. Storm water control plan during construction.

42
43 2. In addition, WDFW shall be provided with the following plans in accord with
44
45 standard EFSEC procedures:
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47

- 1 a. Petroleum and toxic material handling, storage, and spill response
2
3 plan.
4
5 b. Long-term storm water control plan.
6

7 **III. Withdrawal of Objections**
8

9 Based upon SE2's commitments herein, WDFW agrees that SE2's compliance with
10 the terms of this Agreement mitigates the impacts to fish and wildlife resources, including
11 habitat and wetlands. Therefore, based on this Agreement, WDFW stipulates to the
12 withdrawal of all its issues from the adjudicative hearing, and to the withdrawal of previously
13 prefiled testimony of WDFW.
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18 DATED: September ____, 2001.
19
20

21 **PERKINS COIE LLP**
22

23
24
25 By _____
26 Karen M. McGaffey
27 Elizabeth L. McDougall
28 Rolf Johnson
29 Attorneys for Sumas Energy 2, Inc.
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34 **WASHINGTON ATTORNEY GENERAL**
35

36
37
38 By _____
39 William Frymire
40 Assistant Attorneys General
41 Attorneys for Washington Department of
42 Fish and Wildlife
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